



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/147,428	12/22/98	SHIOTA	Y 2839-0065-3-

IM62/0718
OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT
1755 JEFFERSON DAVIS HIGHWAY
FOURTH FLOOR
ARLINGTON VA 22202

EXAMINER

CINTINS, I

ART UNIT	PAPER NUMBER
----------	--------------

1724

DATE MAILED:

07/18/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

Office Action Summary

Application No.

09/147,428

Applicant(s)

Shiota et al.

Examiner

Ivars C. Cintins

Group Art Unit

1724



☒ Responsive to communication(s) filed on Apr 25, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-20 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1, 2, 4, 5, 10-17, and 20 is/are rejected.

☒ Claim(s) 3, 6-9, 18, and 19 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1724

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 10-14 and 20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The term "packet bed" (claim 1, line 3) appears to be a typographical error which renders this claim indefinite. Claims 10-14 and 20 depend from claim 1, and are therefore also indefinite. Applicant is advised that an amendment changing "packet" to --- packed --- in the above noted expression would overcome this portion of the rejection. Claim 20 is further indefinite because the structural interrelationship between the packed bed of catalyst/adsorbent and the wet oxidation treatment unit has not been clearly set forth.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1724

Claims 1, 2, 10 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Miller. The reference discloses an apparatus comprising a packed bed of solid adsorbent (i.e. cation exchange resin bed 32), a water permeable "pressure layer" (bed 34) located above the packed bed, and a layer (30) for "dispersing and mitigating" an upward stream of water located below the packed bed; and this is all that is required by claims 1, 2, 10 and 15.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4, 5, 11, 12, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller. The reference discloses the claimed invention with the exception of the void percentage of the pressure layer and the dispersing and mitigating layer, and the individual height of each of these layers. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ beds having the recited porosity and height in the system of

Art Unit: 1724

Miller, in order to provide a desired degree of liquid purification in this reference system.

Applicant's arguments filed April 25, 2000 have been noted and carefully considered but are not deemed to be persuasive of patentability. Applicant argues that activated carbon bed 30 of Miller is not intended to be a dispersing/mitigating layer, but rather an adsorbent for treating water. Applicant further argues that calcium carbonate bed 34 of Miller is not intended to be a water permeable pressure layer, but rather a chemical substance for treating water. It is pointed out, however, that activated carbon bed 30 of this reference is inherently capable of dispersing and mitigating an upward stream of water to some extent; and therefore, this bed is deemed to be patentably indistinguishable from the broadly recited "dispersing and mitigating layer" of claims 10 and 15. Similarly, calcium carbonate bed 34 of this reference is inherently capable of suppressing a deformation or a movement of the surface of packed bed 32 to some extent; and therefore, this bed is deemed to be patentably indistinguishable from the broadly recited "pressure layer" of claims 1 and 2. The argument that these layers in the reference device are not intended to be employed in the manner recited in Applicant's claims is not deemed to be persuasive of patentability, since it is well settled that a recitation with

Art Unit: 1724

respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Claims 3, 6-9, 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowed if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Claims 13, 14 and 20 would also be allowed if rewritten in independent form to include all of the limitations of the base claim and any intervening claims, and if further amended to overcome the above rejection under 35 U.S.C. § 112.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing

Serial Number: 09/147,428

Page 6


Art Unit: 1724

date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (703) 308-3840. The examiner can normally be reached on Monday through Thursday from 7:30 AM to 6:00 PM.

The fax phone numbers for this art unit are: (703) 305-3599 for "Official" faxes after Final Rejection; (703) 305-7718 for all other "Official" faxes; and (703) 305-3602 for "Draft" and other "Unofficial" faxes.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.


Ivars C. Cintins
Primary Examiner
Art Unit 1724

I. Cintins
July 16, 2000